

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013836**Date Inspected:** 29-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1200**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Jesus Cayabyab**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

1) Repair welding was being performed at E1/E2 – D1 - inside; ABF welding personnel Mitch Sittinger (#0315) and QC Inspector Tony Sherwood.

2) QC Inspector Barry Drake performing Magnetic Particle Testing (MT) at E1/E2-C1 and C2.

3) QC Inspector Jesus Cayabyab performing Ultrasonic Testing (UT) at E2/E3-E1 and E2, outside.

At E1/E2 – D2(bottom plate) this QA Inspector randomly observed QC Inspector Tony Sherwood monitoring repair welding using the Shielded Manual Arc Welding (SMAW) process by ABF welding personnel Mitch Sittinger (#0315) from inside the Orthotropic Box Girder (OBG). This QA Inspector observed 4 areas had been excavated due to defects rejected by ultrasonic testing. The QA Inspector randomly observed QC Inspector Tony Sherwood perform and accept the MT of the excavations prior to welding. This QA Inspector observed QC Inspector Tony Sherwood verify the following welding parameters prior to the start of repair welding: 144 amperes using a 3.2 mm diameter E7018 electrode. The welding observed appeared to comply with WPS - ABF-WPS-D15-1001-Repair. The QA Inspector randomly observed QC Inspector Tony Sherwood perform a visual and MT inspection on the repairs located at weld D1 and upon completion informed this QA Inspector the

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welding was acceptable. The QA Inspector performed a random visual verification of the repairs and the work appeared to comply with the contract requirements.

This QA Inspector randomly observed QC Inspector Barry Drake performing a visual and MT inspections at E1/E2-C1 and C2. QC Inspector Barry Drake informed this QA Inspector several areas were discovered where additional grinding was required to remove excessive weld reinforcement and to provide an acceptable contour. This QA Inspector randomly observed QC Inspector Jesus Cayabyab performing Ultrasonic Testing (UT) at E2/E3-E1 and E2 on the outside of the OBG. QC Inspector Jesus Cayabyab informed this QA Inspector he had observed 3 locations which appeared to be rejects but that he had not performed a UT inspection from the inside of the OBG section and would verify the suspected areas at that time.

During random observations this QA Inspector observed QC personnel had marked adjacent to the weld at E1/E2-E1 and E2 the MT and UT inspections had been performed and accepted. This QA Inspector also observed the marking "undercut and under fill" which was dated after the MT and UT inspection. This QA Inspector informed lead QC Inspector Jesus Cayabyab of the observation. QC Inspector Jesus Cayabyab informed this QA Inspector he was aware of the issue and that QC personnel would mark the areas visually rejected, have ABF personnel perform the repairs and that addition to a visual inspection these areas would be re-inspected by the MT and UT methods.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
